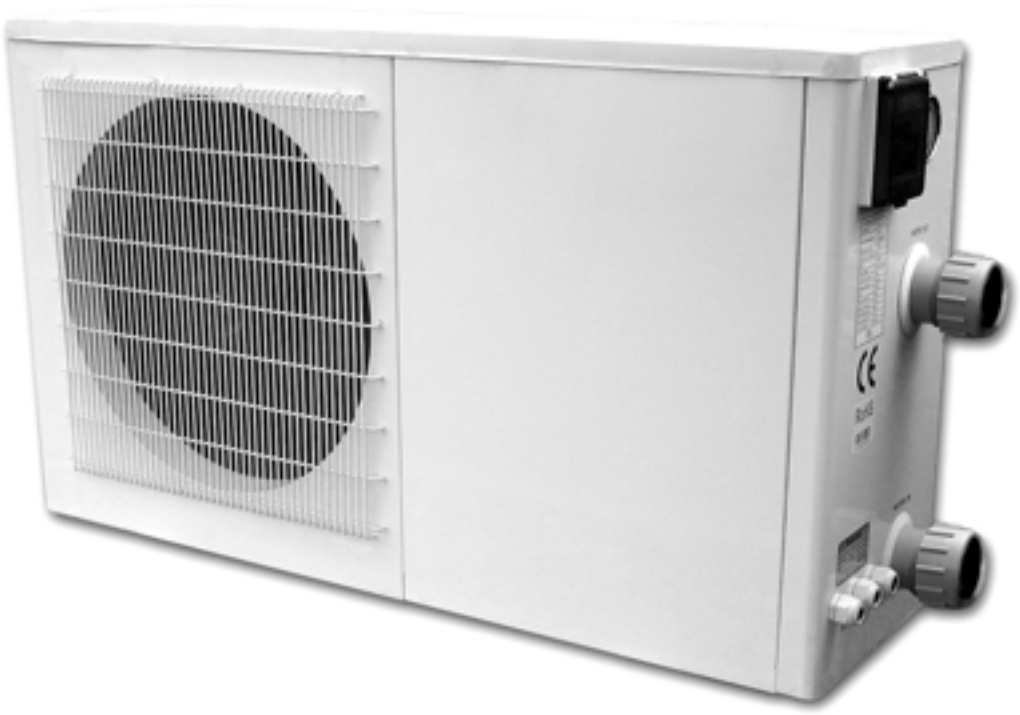
EN

HEATING PUMP FOR SWIMMING POOLS
(THP05 - THP30s)



INSTALLATION
AND USER MANUAL

EN

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Thank you for choosing our product and trusting our company. To ensure that using this product brings you joy, please read the instructions carefully and follow the user manual exactly before use, to prevent equipment damage or unnecessary injuries.

I. Applications

1. To set up an effective and economic pool temperature that it is comfortable and pleasant for you.
2. The user can select the model's technical parameters according to the professional manual. Pool heating was optimised in the factory (see table with technical parameters).

II. Characteristics

1. Highly effective titanium heat exchanger
2. Sensitive and accurate temperature regulation. Water temperature display
3. Ecological coolant R407c
4. Protection against high and low pressures
5. Automatically switches off when it goes below the minimum temperature
6. Forced anti-freezing with regulation temperatures
7. Air pump of international trademark
8. Easy installation and operation

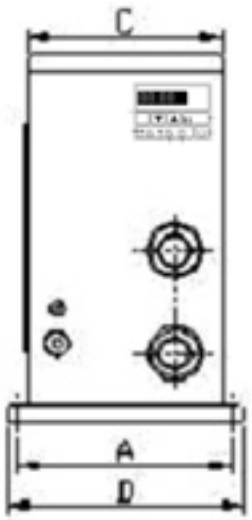
III. Technical parameters

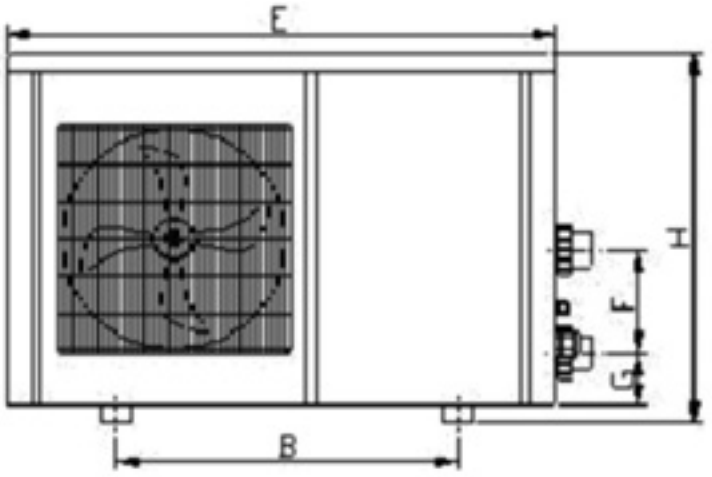
Model	THP05	THP06	THP09	THP12	THP16	THP23	THP23s	THP30s
Input in kW	0,7	0,93	1,4	1,8	2,4	3,7	3,7	4,5
Heating performance in kW	5	6	9	12	16	23	23	30
Efficiency	≥ 6,2	≥ 6,2	≥ 6,2	≥ 6,2	≥ 6,2	≥ 6,2	≥ 6,2	≥ 6,2
Infeed	for one phase 220 - 240V~50Hz						3N-380V~50Hz	
Rated current/ Max.current in A	4,6/6,4	4,6/6,4	6,4/8,2	8,2/11	10,9/14,1	17,5/26,5	5,6/8,5	6,8/9,5
Sound dB(A)	≤ 48	≤ 48	≤ 48	≤ 48	≤ 50	≤ 56	≤ 56	≤ 58
Net weight/ Gross weight in kg	45/50	45/50	52/57	65/70	85/93	102/110	102/110	123/133
Specifications for water supply and discharge piping in mm	50	50	50	50	50	50	50	50
Recommended water flow m^3/h	≥ 3	≥ 3	≥ 3	≥ 5	≥ 6,5	≥ 10	≥ 10	≥ 10

Warning:

1. This product can work satisfactorily in a water temperature range of +5°C to +40°C and at an air temperature of +7° to +40°C; outside these ranges, it will not be efficient. Please note that pool heating performance and its parameters vary according to conditions.
2. On the grounds of technical improvement, related parameters may be periodically adapted without further notice. For details, see the factory label.

IV. Dimensions





Model	A	B	C	D	E	F	G	H
THP05	330	580	285	350	930	200	83	550
THP06	330	580	285	350	930	200	83	550
THP09	330	580	285	350	930	200	83	550
THP12	330	650	300	350	1000	280	83	630
THP16	330	650	300	350	1000	280	83	630
THP23	438	770	425	470	1120	350	83	950
THP30S	438	810	425	470	1180	600	83	950

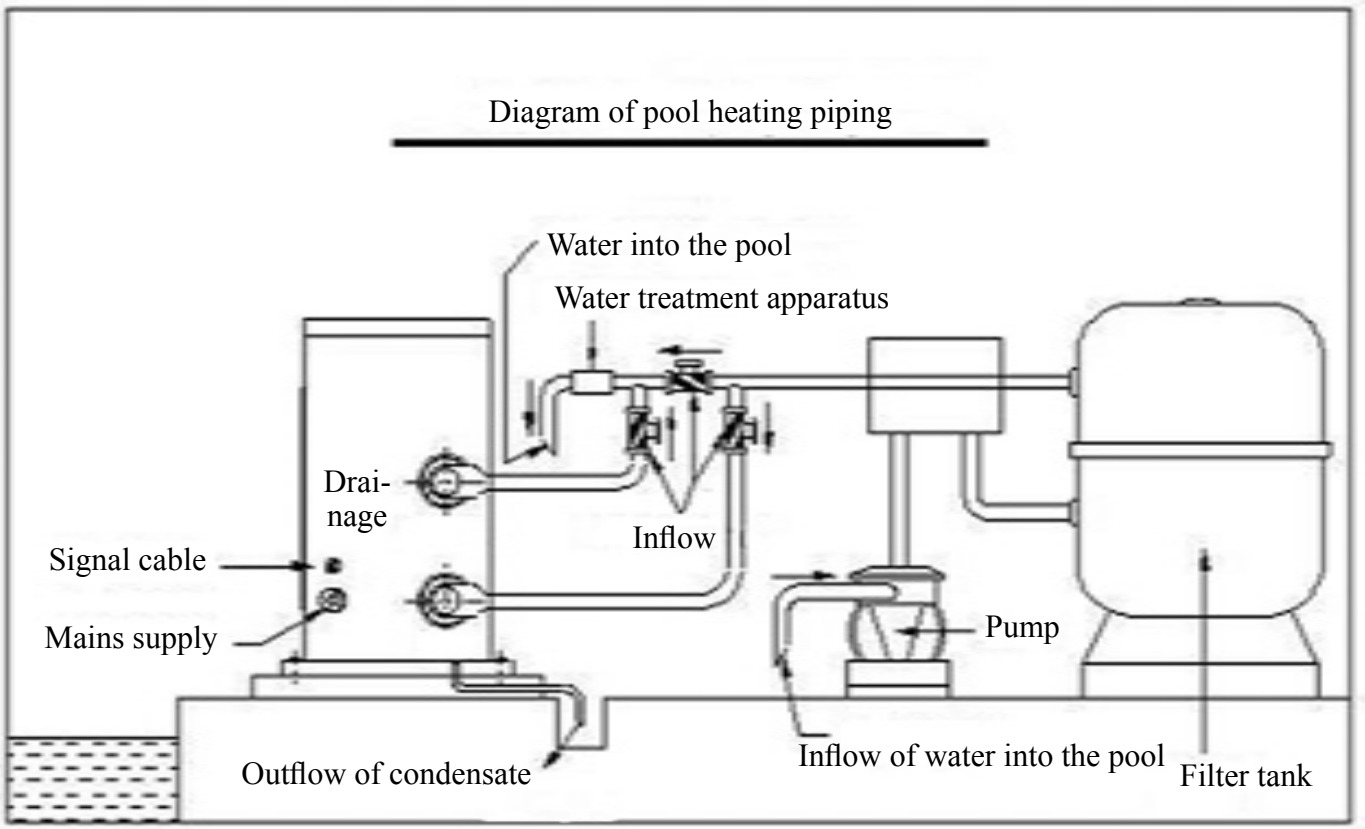
Dimensions shown above are in mm.

Note:

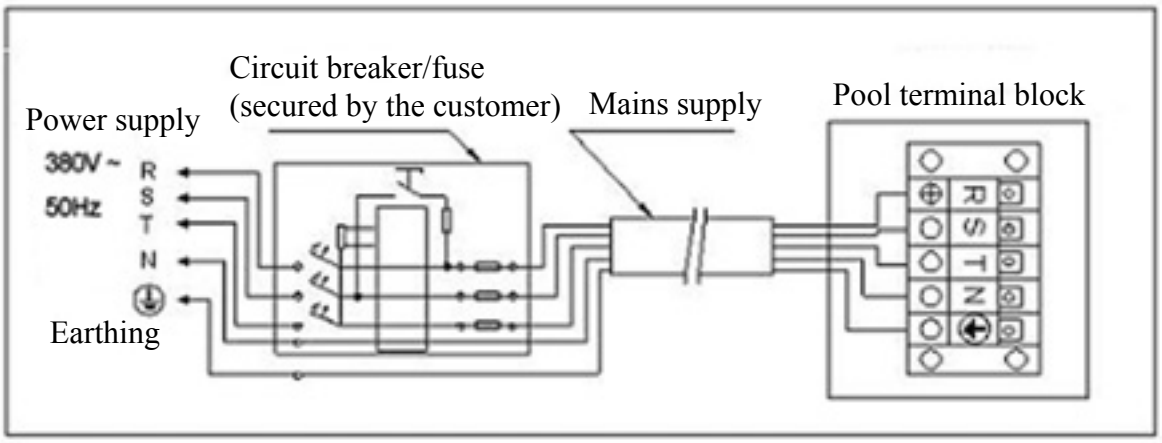
The picture shown above is a diagram of technical conditions for pool heating. It serves only as a reference for the technician during the installation and adjustment of the equipment. On the grounds of continuous improvement, product parameters may change without previous notice.

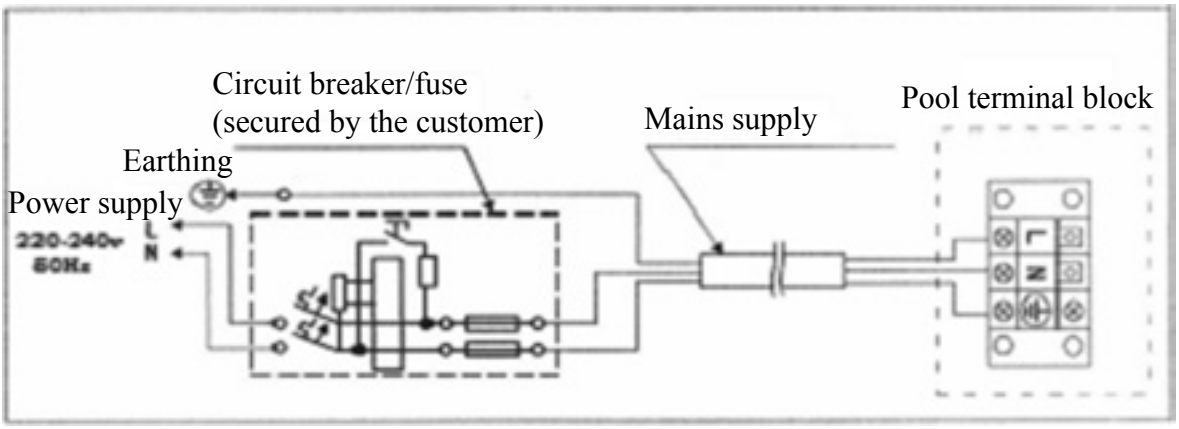
V. Directions for installation

1. **Diagram of water piping connections**
   (Warning: diagram serves only as an illustration, pipeline configuration is only referential)



2. **Electrical connections diagram**





Note: Pool heater must be correctly earthed.

Equipment protection alternatives and cable specifications

MODEL		THP05	THP06	THP09	THP12	THP16	THP23	THP23s	THP30s
Circuit breaker	Rated current A	15	15	15	20	25	40	15	20
	Rated residual current mA	30	30	30	30	30	30	30	30
Circuit breaker A		15	15	15	20	25	40	15	30
Mains supply (mm^2)		3x2.5	3x2.5	3x2.5	3x2.5	3x4	3x6	5x2.5	5x4
Signal cable (mm^2)		3x0.5	3x0.5	3x0.5	3x0.5	3x0.5	3x0.5	3x0.5	3x0.5

Note: The information above is for a mains cable of ≤ 10 m. If the mains cable is ≥ 10 m, the conductor diameter must be increased. The signal cable can be a maximum of 50m long.

3. Installation instructions and requirements

Pool heating must be installed by a skilled team. Users must not install it independently because it could cause injury, or damage to the equipment.

A. Installation

1) Pool heating must be installed in a place with good ventilation;
2) The frame must be prepared with screws (M10) into the concrete base or brackets. The concrete base must be strong and anchored. The bracket must be strong with an anticorrosive treatment.
3) Do not block the inflow or outflow area with articles which would obstruct the flow of air. There must not be any obstruction within 50cm behind the main equipment; otherwise, heating performance will be decreased or absent.
4) The equipment requires a pump attachment (supplied by the customer). Recommended pump specification: flow: see technical parameters, max. transport height ≥10 m;
5) Once the equipment is operating, condensate will leak from the lower part. Give attention to this occurrence. Insert nozzle (accessory) into the opening and secure well. Then attach the condensate drainage tube.

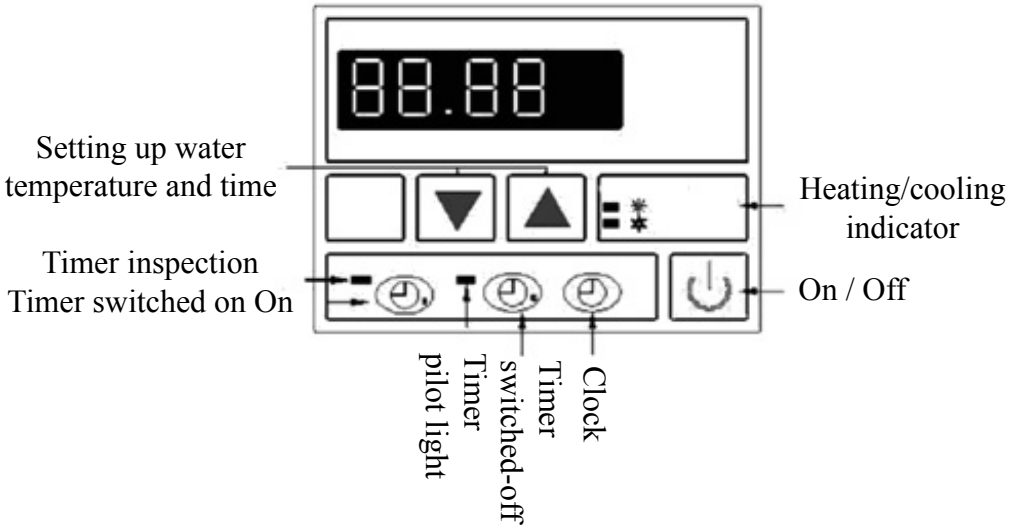
B Electrical connection

1) Connect equipment to corresponding mains. The voltage must correspond with the product's specified voltage.
2) Earth the equipment correctly
3) Electrical connection must be carried out by a professional technician and according to the connection diagram.
4) Install protection against leakage current according to local regulations (leakage current ≤ 30 mA).
5) The mains supply and signal cable must be arranged systematically and logically, so that cables do not interfere with each other.

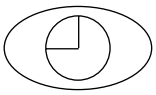
C. After completing all connections and repeated inspection, switch the equipment on.

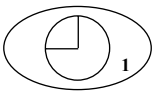
VI. Operating instructions

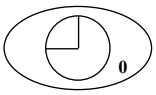
Picture of the button arrangement

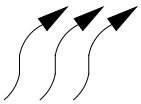


Star Pool
Your Style

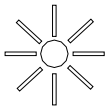

CLOCK


TIME SWITCHED ON


TIME SWITCHED OFF


AUTO/EH

COOLING


HEATING

1. Operating display

A. The display shows the time when the equipment is off
B. The display shows water temperature in the pool when the equipment is off

2. Adjusting water temperature

A. This function is accessible regardless of whether the equipment is off or on.
B. To adjust the water temperature, press the button ▲ or ▼. The temperature will flash on the regulator. Press the button to adjust to the required water temperature ▲ or ▼.
C. After 5 seconds, the regulator display returns to its normal mode.

3. Adjusting time

A. This function is accessible regardless of whether the equipment is off or on.
B. To adjust the time, press the button ◴. When the time on screen begins to flash, press the button ◴ again to adjust hours. Adjust the value with the button ▲ and ▼. Before the time stops flashing, press the button ◴ for adjusting minutes. Adjust the value with the button ▲ and ▼. After adjustment, press the button ◴ and water temperature will be displayed. After 30 seconds, the regulator display returns to its normal mode.

4. Adjusting time of switching on and off of the timer

A. To adjust the time that the timer is switched on, press the button ◴₁. When the pilot light turns on and begins to flash, press the button ◴₁ again to adjust hours. Adjust the value with the button ▲ and ▼. Before the time stops flashing, press the button ◴₁ for adjusting minutes. Adjust the value with the button ▲ and ▼. After adjustment, press the button "TIMER ON" and water temperature will be displayed. After 30 seconds, the regulator display returns to its normal mode.
B. To adjust the time that the timer is switched off, press the button ◴₀. When the pilot light turns on and begins to flash, press the button ◴₀ again to adjust hours. Adjust the value with the button ▲ and ▼ Before the time stops flashing, press the button ◴₀ for adjusting minutes. Adjust the value with the button ▲ and ▼. After adjustment, press the button ◴₀ and water temperature will be displayed. After 30 seconds, the regulator display returns to its normal mode.
C. Cancelling the adjusted time of switching on and off of the timer. To cancel the adjusted time of switching on and off of the timer, press the button ◴₁ or ◴₀. When the displayed information starts to flash, press the button ◴. When the timer pilot light switches off and water temperature is shown on the display, the adjusted time of switching on and off of the timer has been cancelled. After 30 seconds, the regulator display returns to its normal mode.

VII. Testing

1. Examination before use

A. Check installation of the whole apparatus and pipeline connections according to the relevant plan.
B. Check the electrical connection according to the relevant diagram, check earth connection.
C. Check that the equipment's main switch is switched-off.
D. Check the adjusted temperature.
E. Check the supply and outflow of air.

2. Trial

A. The user must "start the pump before the equipment and switch off the equipment before the pump", otherwise the equipment will be damaged.
B. The user must start the pump and check that there are no leakages in the water system; then adjust the temperature on the thermostat and switch the equipment on.
C. The pool heater is equipped with a guard in the form of a delayed start function; when starting the equipment, the ventilator starts 1 minute before the compressor.
D. After starting the heater, check that the equipment does not make excessive noise during operation.

VIII. Safety precautions

1. Warning

A. Adjust to a suitable temperature to give a pleasant water temperature; avoid over- or under-heated water.
B. Do not block air supply or outflow area with objects which could obstruct the air flow, otherwise the heater's performance will decrease or it could even switch off.
C. Do not insert hands into the heat pump's outflow and do not remove the ventilator mesh. It could cause injury.
D. If anything unusual occurs during operation, such as noise, smell, smoke or electrical leak, please switch the equipment off immediately and contact the local seller. Do not try to eliminate the fault yourself.
E. To avoid fire, do not use or store the equipment near to flammable liquids or gases such as thinner, paint or fuel.
F. For optimal heating effects, install a heat insulating material on the pipes between the pool and the heater. During operation of the heater, cover the pool with a heat insulating cover.
G. Connecting piping between the heater and the pool must be ≤10 m, otherwise the heating performance cannot be guaranteed.
H. Equipment in this range is most effective at temperatures +15°C to +25°C.

2. Safety

A. Please keep the main on-switch out of reach of children
B. If there is a power failure during operation, the heater will switch on automatically once the power is restored. Therefore, please switch the heat off during a power failure and after power is restored, re-adjust the temperature.
C. During a thunderstorm, please switch off the power supply, to protect the equipment from damage by lightning.
D. During long-term non-use, disconnect power and drain water from the equipment by turning on the tap in the supply pipeline.

IX. Maintenance

A. Before examination and repair disconnect the heater's power supply.
B. In winter, drain the water from the equipment and disconnect the power supply to prevent damage to the equipment. Cover the casing with plastic sheeting which will protect it from dust.
C. Clean the equipment with neutral household cleaning materials or with clean water, never use petrol, thinner or other similar materials.
D. Check screws, cable and connection regularly.

X. Solving common malfunctions

Malfunction Equipment does not start functioning	Reason	Solution
	Power supply switched-off	Wait for it to be switched-on again
	Equipment switched-off	Switch on equipment
	Blown fuse	Change it
	Fallen circuit breaker	Switch on fuse again
Reaches air release but heating is not sufficient.	Blocked air supply	Remove obstruction
	Blocked air outflow	Remove obstruction
	Protection in the form of 3 minute time delay	Wait
	Adjusted temperature is too low	Increase the adjusted temperature correspondingly
If the above shown malfunctions cannot be solved, please contact a specialist and state the equipment model and give a detailed description of the malfunction.		

Warning! To prevent potential injuries, do not take apart or repair the pool heater yourself.

Malfunction codes

No.	Malfunction code	Description of malfunction
1	EE 1	Protection against high pressure
2	EE 2	Protection against low pressure
3	EE 3	Protection against low water pressure
4	EE 4	Protection of three-phase sequence (only for three-phase equipment)
5	PP 1	Pool and bath heater sensor malfunction
6	PP 2	Suction sensor malfunction
7	PP 3	Spiral heating pipes sensor malfunction
8	PP 4	Intake pipe sensor malfunction
9	PP 5	Air temperature sensor malfunction
10	PP 6	Protection against compressor displacement overloading
11	PP 7	If the temperature is <5°C, protection in the form of automatic switching off (it is not a malfunction)

Guarantee conditions
Guarantee conditions are in accordance with business and guarantee conditions of your supplier.

Product safe liquidation after service life expiring
Ensure ecological liquidation by specialized firm at products service life expiring

Claims and service
Complains and claims are proceeded according to proper law about consumer protection. In the event of inquest irremovable mistakes will turn on his supplier.

Date.....

Your seller

Printing mistakes reserved.